(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 12 May 2005 (12.05.2005)

PCT

(10) International Publication Number WO 2005/042369 A2

(51) International Patent Classification⁷:

B65D 71/00

(21) International Application Number:

PCT/US2004/033760

(22) International Filing Date: 12 October 2004 (12.10.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10/693,210

24 October 2003 (24.10.2003) U

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US

10/693,210 (CON)

Filed on

24 October 2003 (24.10.2003)

- (71) Applicant: GRAPHIC PACKAGING INTERNA-TIONAL, INC. [US/US]; 814 Livingston Court, Marietta, GA 30067 (US).
- (72) Inventor: SCHUSTER, Richard, L.; 220 Sussex Drive, West Monroe 71203 (US).
- (74) Agents: ISAF, Louis, T. et al.; Womble Carlyle Sandridge & Rice, PLLC, P.O. Box 7037, Atlanta, GA 30357-0037 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A2

(54) Title: HANDLE AND TOP HANDLE REINFORCEMENT FOR A PAPERBOARD CARTON

(57) Abstract: A fully enclosed carton for carrying heavy loads with a reinforcement insert for the handle apertures located in the top end flaps of the carton. The paperboard reinforcing insert may be extended as a bridge across the top panel of the carton to prevent tearing of the handle apertures in the top end flaps and also tearing in the top panel of the carton when carrying a heavy load. The carton may have one or more dispensers in the top panel which may extend into an adjoining side panel. Multiple tear lines may be formed for the dispenser flap in the insert that extends across the top panel to permit easy access to the containers, such as bottles, in the carton. The paperboard reinforcing insert may have a larger aperture than the handle aperture in each top end flap to adjust for any imprecision in the alignment of the paperboard insert in forming the carton sleeve from the paperboard blank. When the paperboard insert extends across the top panel and one or more dispensers are formed in the top panel, multiple tear lines may be used to form the flaps in the insert to compensate for any imprecision in the insert that extends across the top panel into the carton sleeve when it is being formed.